



Altus

clear thinking for Financial Services

A picture paints 1125 words

The quantity of data we all have to deal with is increasing at an incredible rate. According to research by IDC, the amount of information created in the average business is rising at an annual rate of 65%. Meanwhile the majority of recipients find over half the information they receive to be of little value - no wonder then that the survey concluded 75% of office workers already suffer from information overload.

So how do we cope with this deluge of data? Various clever technologies are emerging to take the strain, from smarter email filtering to dynamic content analysis and even ambient intelligence. But one of the most common responses has nothing to do with technology and everything to do with the human brain; an increasing dependence on visual content to assess key messages.

This is not really surprising given how much value we get from pictures. Various studies have found that it takes around 2-3 seconds to assimilate an image compared to 20-30 seconds to absorb a textual description conveying the same information. With an average comprehension rate of 3 words per second, and a typical business architecture diagram covering say 15 objects, that means a good picture can paint around 1125 words!



Visualisation

Statisticians have long understood the power of visual communication and developed some deceptively simple techniques to interpret complex datasets – just consider how much easier it is to see pattern in a histogram or pie chart compared to poring over columns of numbers.

The power of visualisation extends beyond just quantitative data though and, with a little care, can be used to help a business audience understand and engage with complex concepts much more readily than is possible using text alone. This is particularly relevant for Enterprise Architects who are tasked with sifting through mountains of complexity to distil a clear, concise message to business decision makers – probably the most information overloaded of audiences

But how exactly do you use a picture to cut through the swathes of project documentation and really paint a thousand words which make sense to a business audience? Clearly there is no single magic answer but there are a few simple visualisation principles which can help.

Less is more. Generally, when you draw an architectural diagram for a business audience, the subject area you are attempting to illuminate will have several dimensions to consider; people, systems, cost, location, etc. Whilst it is tempting to cram all of them onto a single picture, don't do it – limit the number of aspects you represent on one diagram to 2 or 3. Likewise, resist the analytical urge to demonstrate completeness in any one dimension; if you're using a picture to explore change, then focus just on the things that are changing.

Colour. Perhaps the most obvious tool for communicating your content is colour; it is easily registered, with a broad palette to choose from and can work at almost any resolution. But be careful,

there are pitfalls. Some colours have subtle embedded meaning that may confuse if used ambiguously – red for danger, blue for cool, green for approval, etc. Then there are practical considerations; the crisp colours on your lovely new monitor may not look quite so distinct when you print or project them. Despite these caveats, colour is still your most powerful visual tool and can work very effectively to communicate almost any dimension you choose. The key is to choose just one dimension in a given context and then to use colour precisely and consistently for that purpose alone.

Shape. Shape is a more subtle visual tool than colour and should be used sparingly if it's to work well. In practice that means picking a small subset of the myriad geometric shapes available (not much more than circles, triangles and rectangles) and maintaining good separation between them in diagrams. More finely differentiated shapes are commonly used to convey meaning in formal notations (BPMN, SSADM, etc.) but these are primarily for detailed communication between peers; don't assume that these symbols will make sense outside that context.

Size. Unless you're using scale as the primary device in a diagram (for example a bar chart), then it can be very difficult to convey more than a coarse classification with this technique and even here you may need a steeply graduated scale to make the point. Fine distinctions are very hard to see from any distance and in general it's best to use 3 or 4 step changes with a doubling in size at each step.

Position. It may not seem like it initially, but the location of objects on a diagram can be an extremely powerful tool. The numerous ways to arrange the same set of objects on a single page can be used to convey dozens of different concepts such as classification, decomposition, dependence, sequence, importance and so on. The important

Visualisation

point is to choose one concept to represent with position and then stick to it for a given type of diagram. If you intend to overlay additional dimensions on top then it becomes even more crucial that you stick to one placement scheme, creating a silhouette of the base concept in the viewer's mind.

Metaphor. A powerful technique which combines several features from the preceding sections is the use of visual metaphor as shorthand for more complex objects or concepts. A simple example is the use of stylised avatars to depict specific roles (for example a policeman as regulatory body) but more abstract concepts can be handled this way too, such as a telephone directory to represent a UDDI registry. Whatever you choose to depict though, a couple of tips. First make sure your artwork follows a consistent style - I won't even attempt a definition of style here but fortunately the Microsoft clipart galleries and various online graphics stores allow you to sort and select content based on it. Second be careful of any unintended meaning that your metaphor may come bundled with; using a sheriff avatar instead of a policeman in the example above may appear to do the same job but comes with (probably) unwanted Wild West connotations.



Taken to the extreme, it is possible to fashion an iconic image which becomes a metaphor for one whole dimension of your architecture and then you really do have a potent tool for visual communication. In recent years the concept of business capability frameworks have gained traction in just this space, aiming to establish one common language (and view) of business activity. Whilst the acid test of the content in such a framework is completeness and consistency, they should still satisfy the basic visualisation principles outlined here to work on an iconic level. Your image won't become a business icon overnight but if you stick to these guidelines there is every chance it will get there.

None of this is intended to undermine the importance of textual documents in Enterprise Architecture; where precision and formality is required then text is the answer. The point is that EA can do much more to help business change projects deliver successfully but only by engaging a business audience and to do that we need better pictures rather than more words.

Of course I could have illustrated this whole article with a single picture:



There are two staggered road junctions ahead; the first will appear on your right and then another on the left. Both these junctions are minor roads and vehicles on them should give way. You are driving on the main carriageway and have right of way but be careful.

Figure 1: Picture versus Words




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Altus understand Financial Services - the products, the processes, the people and the systems that make the whole thing tick. With years of experience in complex change programmes, we understand that successful solutions begin with the business.

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